**Before The**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**



| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| Amendment of Section 73.622(b) | ) | Docket No. _____ |
| DTV Table of Television Allotments | ) | |
| (Hattiesburg, Mississippi) | ) | |

To: Chief, Allocations Branch

## PETITION FOR RULE MAKING

The Mississippi Authority for Educational television ("MAET"), through its attorneys, hereby petitions, pursuant to Section 73.622(a) of the FCC's rules, for amendment of Section 73.622(B), the DTV Table of Television Allotments, to allot DTV Channel *9 for noncommercial educational use as the paired channel for existing NTSC Channel *47 at Hattiesburg, Mississippi. In support thereof, the following is respectfully shown:

1. MAET is an applicant for a new public television station on NTSC Channel *47 at Hattiesburg, Mississippi (FCC File No. BPET-960724KS). Inasmuch as this application was filed shortly after the Commission's "freeze" on certain new NTSC applications, no corresponding DTV channel was paired with Channel *47, Hattiesburg, in the Commission's Sixth Report and Order. On December 17, 1999, MAET filed its notification of intent to maximize DTV facilities in connection with this NTSC allotment. MAET is also the licensee of television translator Station W47BP, serving Hattiesburg, Mississippi. MAET is committed to activating facilities, including DTV facilities, to serve the Hattiesburg area. The instant proposal follows extensive review by MAET of DTV potentialities throughout the State of Mississippi. Attached hereto is an engineering

statement which confirms that MAET's proposed station can operate on DTV Channel *9 using an omni-directional antenna with an effective ERP of 1.0 kW at 99 meters AAT without causing above de minimis interference to any of the applicable surrounding stations.

2. For the foregoing reasons, and for all of the reasons set forth in the attached engineering statement, MAET submits that the public interest, convenience and necessity will be amply served by expeditious and favorable consideration of this petition for rule making. Such action by the FCC will allow MAET to construct and operate DTV facilities to serve Hattiesburg, Mississippi and its environs. As shown in the attached engineering statement, this DTV reserved allocation can be implemented in a manner that is fair, efficient and without adverse impact upon area NTSC and DTV authorizations and allotments.

3. Accordingly, MAET respectfully urges the FCC to issue forthwith a Notice of Proposed Rule Making to allot DTV Channel *9 at Hattiesburg, Mississippi.

Respectfully submitted,

MISSISSIPPI AUTHORITY FOR
EDUCATIONAL TELEVISION

By: Malcolm G. Stevenson
Malcolm G. Stevenson

SCHWARTZ, WOODS & MILLER
1350 Connecticut Avenue, N.W.
Suite 300
Washington, D.C. 20036-1717
202/833-1700

Its Attorneys
May 1, 2000

# APPLICATION FOR CONSTRUCTION PERMIT TELEVISION BROADCAST STATION DTV CHANNEL 9, ERP 1 kW AT 99 METERS ABOVE AVERAGE TERRAIN MISSISSIPPI AUTHORITY FOR EDUCATIONAL TELEVISION HATTIESBURG, MISSISSIPPI

KESSLER & GEHMAN ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTING ENGINEERS

| SECTION V-D - DTV BROADCAST ENGINEERING DATA | FOR COMMISSION USE ONLY<br>File No. _____<br>SSB Referral Date _____<br>Referred By _____ |
|---|---|
| Name of Applicant<br>**MISSISSIPPI AUTHORITY FOR EDUCATIONAL TELEVISION** | Call Letters (if issued)<br>**N/A** |

**Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Items 1-22, below.** If an item is not applicable, enter N/A.

**Certification Checklist:** A correct answer of "Yes" to all of the questions below will ensure an expeditious grant of a construction permit. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:

   (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☑ No

   (b) It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☑ No

   (c) It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☑ No

2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. ☑ Yes ☐ No

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. ☑ Yes ☐ No

4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. ☑ Yes ☐ No

5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. ☑ Yes ☐ No

**Application Data:**

1. Channel
   (a) DTV Channel No. **9**
   (b) Associated analog TV station channel no., if any **47**

2. Principal community to be served:

| City or Town | State |
|---|---|
| **HATTIESBURG** | **MS** |

3. Effective radiated power (average power): *(in the main lobe of radiation, if directional)* **1.0** kw

4. Height of antenna radiation center above average terrain (HAAT): *(to the nearest meter)* **99** meters

**Section V-D -D TV BROADCAST ENGINEERING DATA (Page 2)**

5. **Purpose of Application:** (*check appropriate boxes*)

- [x] Construct a new (main) facility
- [ ] Construct a new auxiliary facility
- [ ] Modify construction permit for main facility
- [ ] Modify construction permit for auxiliary antenna
- [ ] Modify licensed main facility
- [ ] Modify licensed auxiliary antenna

If purpose is to modify, indicate the nature of change(s) by checking appropriate box(es) and specify the file number(s) of the authorizations affected.

- [ ] Antenna supporting structure height
- [ ] Effective radiated power
- [ ] Antenna height above average terrain
- [ ] Channel
- [ ] Antenna location
- [ ] Antenna system
- [ ] Other (summarize)

File Number(s) _____

6. **Exact location of transmitting antenna..**

(a) Give address, city/state or if no address, specify distance and bearing relative to the nearest town or landmark.

**5.2 KM NW OF HATTIESBURG, FORREST COUNTY, MS**

(b) Geographical coordinates *(to nearest second)*. If mounted on element of an AM array, specify coordinates or center of array. Otherwise, specify tower location. Specify South Latitude and East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed. *(The Commission requires coordinates based on NAD 27.)*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Latitude | 31 ° | 21 ' | 02 " | Longitude | 89 ° | 22 ' | 12 " |

7. (a) Elevation *(to the nearest meter)*

(1) of site above mean sea level; **76** meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and **102** meters

(3) of the top of supporting structure above mean sea level [(a)(1) + (a)(2)]. **178** meters

(b) Height of radiation center: *(to the nearest meter)*

(1) above ground; and **97** meters

(2) above mean sea level [(a)(1) + (b)(1)]; **173** meters

8. Attach as an Exhibit sketch(es) of the supporting structure, labeling all elevations required in item 7 above. If mounted on an AM directional array element, specify heights and orientations of all array towers, as well as location of any FM radiator.

Exhibit No. **EXHIBIT 2**

9. **Antenna**

(a) Manufacturer **DIELECTRIC** (b) Model No. **TF-2C**

(c) Is a directional antenna proposed? ☐ Yes ☑ No

If Yes, specify major lobe azimuth(s)_____ degrees True and attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No.

(d) Is electrical beam tilt proposed? ☐ Yes ☑ No

If Yes, specify _____ degrees electrical beam tilt and attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No. **EXHIBIT 3**

(e) Is mechanical beam tilt proposed? ☐ Yes ☑ No

If Yes, specify _____degrees mechanical beam tilt toward azimuth _____True and attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No.

(f) The proposed antenna is: *(check only one box)*

☑ Horizontally polarized ☐ Circularly polarized ☐ Elliptically polarized ☐ Other: _____

10. Will the antenna be mounted on an antenna structure which has been registered with the Commission, to include the proposed antenna installation? ☐ Yes ☑ No

If Yes, provide the seven digit registration number and, unless item 11 also applies, proceed to item 15. _____

11. Has the owner of the antenna structure filed an application for registration with the Commission that will include the proposed facility? ☐ Yes ☑ No

If yes, provide the date FCC Form 854 was filed and proceed to item 15. _____

12. (If applicable) If the antenna structure is not yet registered but will be under the Commission's phased registration plan, has the FAA previously determined that the structure would not adversely affect safety in air navigation? ☑ Yes ☐ No

If Yes, proceed to item 15.

13. Antenna structure will be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town or settlement where it is evident beyond all reasonable doubt that the structure is so shielded that it will not adversely affect safety in air navigation, and therefore does not require registration. ☐ Yes ☐ No

If yes, submit as an Exhibit a detailed explanation and/or diagram to support your claim and skip to item 15. Exhibit No.

**Section V-D -D TV BROADCAST ENGINEERING DATA (Page 4)**

14. Antenna structure does not otherwise meet FAA Notification criteria as defined under 47 C.F.R. Section 17.7 and therefore does not require registration. ☐ Yes ☐ No

If Yes, give reason below.

15. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? ☑ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both. **W47BP BLTT-930519IB**

16 Does the application propose to correct previous site coordinates? ☐ Yes ☑ No

If Yes, list old coordinates.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Latitude | o | ' | " | Longitude | o | ' | " |

17. Attach as an Exhibit a topographic map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the provisions of 47 C.F.R. Section 73.625(b). The map must further display clearly and legibly the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No. **EXHIBIT 4**

18. Attach as an Exhibit a map (*Sectional Aeronautical Chart or equivalent)* which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No. **EXHIBIT 5**

(a) the proposed transmitting location, and the radials along which profile graphs have been prepared;
(b) the DTV coverage contour as established in 47 C.F.R. Section 73.625(b); and
(c) the legal boundaries of the principal community to be served.

19. Terrain and coverage data (to be calculated in accordance with 47 C.F.R. Section 73.625(b))

Source of terrain data: *(check only one box below)*

☐ Linearly interpolated 30-second database (Source: _____)

☑ Linearly interpolated 3-second database (Source: **DEFENSE MAPPING AGENCY**)

☐ 7.5 minute topographic map

☐ Other *(briefly summarize)*

| Radial bearing (degrees True) | Height of radiation center above average elevation of radial from 3 to 16 km (meters) | Predicted distance to the DTV Coverage Contour (kilometers) |
|---|---|---|
| *125 | **121** | **60.2** |
| 0 | **106** | **58.0** |
| 45 | **120** | **60.0** |
| 90 | **116** | **59.5** |
| 135 | **113** | **59.1** |
| 180 | **84** | **54.0** |
| 225 | **75** | **52.3** |
| 270 | **68** | **50.7** |
| 315 | **110** | **58.7** |

*Radial through principal community, if not one of the major radials. This radial should NOT be included in the calculation of HAAT.

20. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623(a)? (Applicable only if **Certification Checklist** items 1(a), (b), or (c) are answered "No.") ☑ Yes ☐ No

    If No, attach as an Exhibit justification therefore, including a summary of any related previously granted waivers. Exhibit No.

21. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** item 3 is answered "No.") Exhibit No.

22. Environmental Statement. *(See 47 C.F.R. Section 1.1301 et seq.)*

    (a) If a Commission grant of this application comes within 47 C.F.R. Section 1.1307, such that it may have a significant environmental impact, submit as an Exhibit an Environmental Assessment required by 47 C.F.R. Section 1.1311. Exhibit No.

    (b) If No, explain briefly why not.

    **THE PROPOSED CONSTRUCTION WOUDL HAVE NO SIGNIFICANT IMPACT AS DEFINED IN SECTION 1.0137 OF THE FCC RULES ***

    (c) Pursuant to OST Bulletin No. 65, the applicant must explain in an Exhibit what steps will be taken to limit the RF radiation exposure to the public and to persons authorized access to the tower site. In addition, where there are multiple contributors to radio frequency radiation, you must certify that the established RF radiation exposure procedures will be coordinated with all stations. *

    *** SEE ATTACHED ENGINEERING STATMENT.**

## CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

| | |
|---|---|
| Name (Typed or Printed)<br>**RYAN WILHOUR** | Relationship to Applicant (e.g., Consulting Engineer)<br>**CONSULTING ENGINEER** |
| Signature<br>Ryan Wilhour | Address (include ZIP Code) **KESSLER AND GEHMAN ASSOCIATES, INC.**<br>**507 NW 60TH STREET, SUITE C, GAINESVILLE, FL 32607** |
| Date<br>**APRIL 18, 2000** | Telephone No. (include Area Code)<br>**352-332-3157** |

ENGINEERING STATEMENT OF RYAN C. WILHOUR OF THE FIRM OF KESSLER AND GEHMAN ASSOCIATES, INC., CONSULTING ENGINEERS IN CONNECTION WITH AN APPLICATION FOR MISSISSIPPI AUTHORITY FOR EDUCATIONAL TELEVISION WHICH WOULD OPERATE ON DTV CHANNEL 9 WITH A MAXIMUM EFFECTIVE RADIATED POWER OF 1.0 KILOWATT HORIZONTALLY POLARIZED AT AN EFFECTIVE ANTENNA HEIGHT OF 99 METERS ABOVE AVERAGE TERRAIN IN THE VICINITY OF HATTIESBURG, MISSISSIPPI

I, Ryan C. Wilhour, am an associate of Kessler and Gehman Associates, Inc. with offices in Gainesville, Florida. I am a graduate of the University of Florida with a Bachelor of Science Degree in electrical engineering.

This firm has been employed by Mississippi Authority for Educational Television (MAET) to make engineering studies and to prepare the engineering portion for construction permit for a new television broadcast station to operate on DTV channel 9 with a maximum effective radiated power of 1.0 kilowatt horizontally polarized at an effective antenna height of 99 meters above average terrain in the vicinity of Hattiesburg, Mississippi.

MAET is the licensee of FCC File No. BPET-960724KS, a pending application that requests a waiver of the freeze imposed for new NTSC stations. Since the pending application was filed slightly after the freeze, a corresponding DTV station was not assigned for it in the DTV table of allotments proposed in the Sixth Report and Order.

## ATTACHED EXHIBITS

In carrying out the engineering studies the following attached exhibits were prepared by me or under my supervision:

1. Proposed engineering specifications (Exhibit 1)
2. Elevation drawing of the antenna system (Exhibit 2)
3. Antenna Elevation Patterns (Exhibit 3)
4. USGS 7.5 minute topographic quadrangle showing the proposed transmitter location and coordinate lines (Exhibit 4)
5. Map showing the predicted DTV coverage contour (Exhibit 5)
6. Interference studies to other DTV and NTSC stations (Exhibit 6)

## TRANSMITTER LOCATION

MAET proposes to operate the DTV facilities proposed at an existing transmit tower and replace W47BP FCC file number BLTT-930519IB with the pending application for a NTSC station and the instant application proposed herein.

## ENVIRONMENTAL IMPACT / RFR HAZARD ANALYSIS

An analysis has been made of the human exposure to RFR using the calculation methodology described in *OET Bulletin 65, Edition, 97-01*. A conservative vertical plane relative field factor of 0.400 from the manufacturer's antenna pattern and a maximum average ERP of 1.0 kW was used to calculate the power density 2 meters above ground level in the immediate area surrounding the tower. The calculation was made using a frequency of 186 MHz, which is the lower edge of the proposed channel. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

For the proposed channel, the maximum permissible exposure (MPE) limit for general population / uncontrolled exposure is **0.2 mW/cm$^2$**. For the proposed channel, the MPE limit for occupational / controlled exposure is **1.0 mW/cm$^2$**. At a reference point two meters AGL at the base of the supporting structure, the calculated power density is **0.001 mW/cm$^2$**. This is **0.005%** of the MPE limit for general population / uncontrolled exposure, and **0.1%** of the MPE limit for occupational / controlled exposure.

Pursuant to *OET Bulletin 65* concerning multiple-user transmitter sites, only those licensees whose transmitters produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR. Since the proposed operation contributes 0.1% of the most restrictive permissible exposure at any location 2 meters above the ground, it is not considered a significant contributor to the RFR exposure. Thus, contributions to exposure from other RF sources in the vicinity of the proposed facility were not taken into account.

The proposed facility support structure is encompassed by a chain link fence, which restricts access from the general public. The applicant will cooperate with any other users of the tower by reducing the power to the antenna or if necessary completely cutting it off in order to protect maintenance workers on the tower.

INTERFERENCE ANALYSIS AND PETITON FOR RULE MAKING TO AMEND THE DTV TABLE OF ALLOTMENTS

It is respectfully requested to amend the DTV table of allotments located in Table 1 of Appendix B in the Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order to include the proposed facility in the instant application.

Detailed spacing and interference studies confirm that the proposed facility may operate on channel 9 using a non-directional antenna with a maximum effective ERP of 1.0 kW at 99 meters above average terrain and comply with the 2% and 10% de *minimis* interference to the surrounding stations.

Exhibit 6A1 and 6A2 demonstrate the stations that do not meet the separation criteria. Of the stations studied, WAFB and WALA-DT are predicted to receive interference. Exhibit 6B1 and 6B2 demonstrate the existing interference caused to WAFB and demonstrates a base population of 1,183,000 people that do not receive interference. Exhibit 6B3 and 6B4 demonstrate that the new interference caused from the associated DTV station would affect 3,000 people. Thus, the 2%*de minimis* interference would be 3,000 / 1,183,000 or 0.25%. Exhibit 6C1 and 6C2 demonstrate the existing interference caused to WALA-DT and shows a base population of 1,010,000 people that do not receive interference. Exhibit 6C3 and 6C4 demonstrate that the new interference caused from the associated DTV station would affect 4,000 people. Thus, the 2% *de minimis* interference would be 4,000 / 1,010,000 or 0.396%. Thus, the parameters proposed herein are in compliance with the *de minimis* standard pursuant 47 C.F.R. §73.623(c) of the FCC rules.

The applicant accepts full responsibility for the elimination of any objectionable interference including that caused by intermodulation to facilities in existence or authorized prior to the grant of this application.

The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge. Executed on April 18, 2000.

KESSLER AND GEHMAN ASSOCIATES, INC.

Ryan Wilhour
Consulting Engineer

## HATTIESBURG, MISSISSIPPI

## ENGINEERING SPECIFICATIONS

A. Transmitter Site (NAD 27)

| | | |
|---|---|---|
| North Latitude | 31 ° 21 ' 02 " | |
| West Longitude | 89 ° 22 ' 12 " | |
| Street Address or Location | 5.2 KM NW of Hattiesburg, Forrest County, Mississippi | |

B. Proposed Facility
DTV Channel

| | | |
|---|---|---|
| Number | 9 | |
| Frequency | 186-192 | MHz |

C. Antenna Height

| | | |
|---|---|---|
| Height of Site Above Mean Sea Level (AMSL) | 76 | m |
| Overall Height of Structure Above Ground (including all appurtenances) | 102 | m |
| Overall Height of Structure Above Mean Sea Level (including all appurtenances) | 178 | m |
| Height of Site Above Average Terrain | 2 | m |
| Effective Height of Antenna Above Ground | 97 | m |
| Effective Height of Antenna Above Average Terrain | 99 | m |
| Effective Height of Antenna Above Mean Sea Level | 173 | m |

D. Antenna Parameters – Horizontal Polarization

| | | |
|---|---|---|
| Maximum Antenna Gain in Beam Maximum | 3.42 | dB |
| Maximum Antenna Gain in Horizontal Plane | 3.42 | dB |
| Maximum Effective Radiated Power | 0.00 | dBk |
| In Beam Maximum | 1.00 | kW |
| Maximum Effective Radiated Power | 0.00 | dBk |
| In Horizontal Plane | 1.00 | kW |

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MISSISSIPPI AUTHORITY FOR
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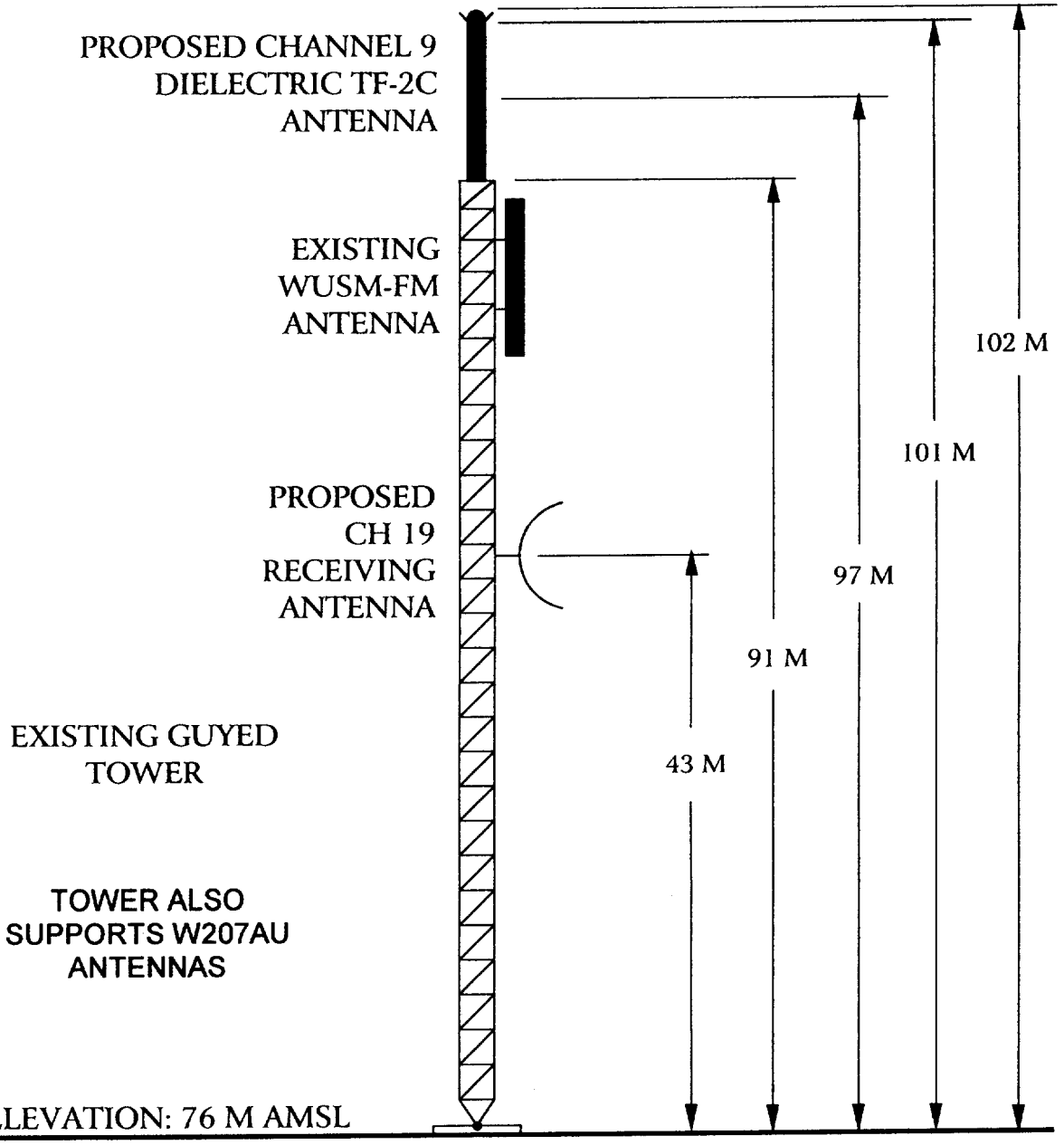
HATTIESBURG, MISSISSIPPI

# ELEVATION VIEW




| | |
|---|---|
| OVERALL HEIGHT AGL: | 102 M |
| OVERALL HEIGHT AMSL: | 178 M |
| RADIATION CENTER AGL: | 97 M |
| RADIATION CENTER AMSL: | 173 M |

COORDINATES:

| | | | |
|---|---|---|---|
| N. LATITUDE | 31° | 21' | 02" |
| W. LONGITUDE | 89° | 22' | 12" |

**NOTE: NOT TO SCALE**

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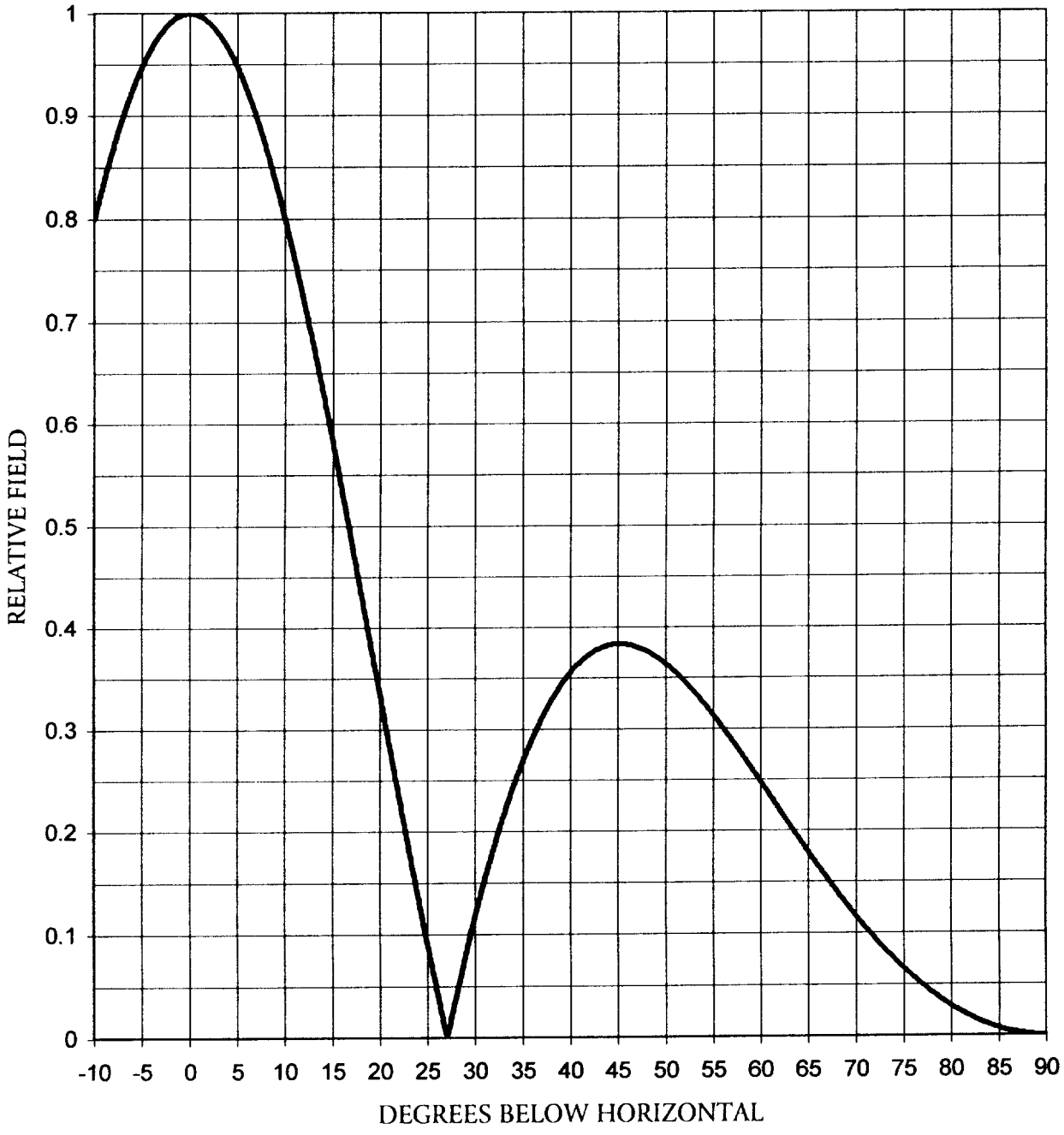
HATTIESBURG, MISSISSIPPI

2K0418 FIGURE 2

# ELEVATION PATTERN

DIELECTRIC TF-2C

| | | | |
|---|---|---|---|
| RMS Gain at Main Lobe | 2.2 (3.42 dB) | Beam Tilt | 0.00 deg |
| RMS Gain at Horizontal | 2.2 (3.42 dB) | Frequency | 189 MHz |

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HATTIESBURG, MISSISSIPPI

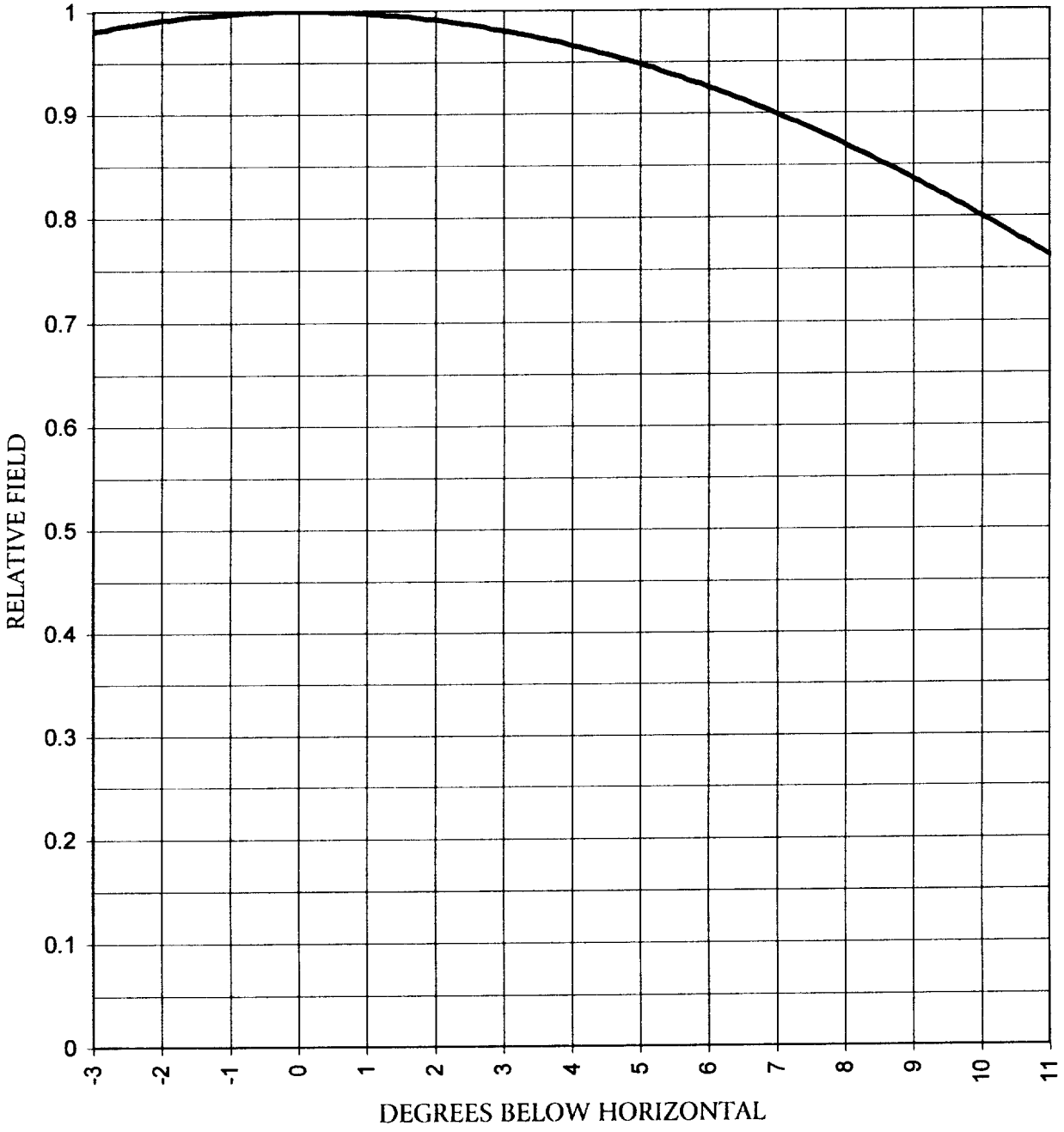
2K0418

EXHIBIT 3A

# ELEVATION PATTERN

DIELECTRIC TF-2C

| | | | |
|---|---|---|---|
| RMS Gain at Main Lobe | 2.2 (3.42 dB) | Beam Tilt | 0.00 deg |
| RMS Gain at Horizontal | 2.2 (3.42 dB) | Frequency | 189 MHz |

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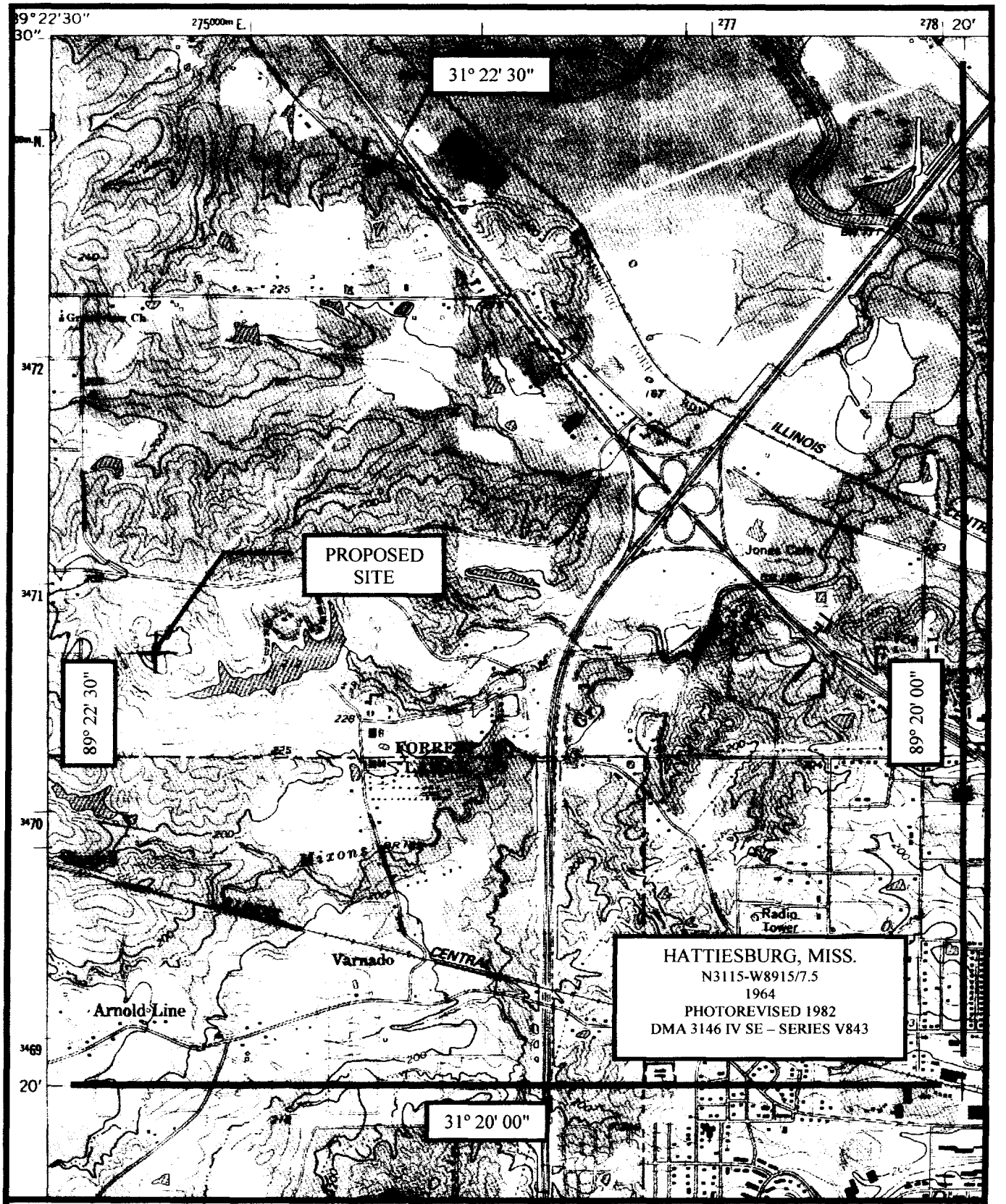
2K0418

EXHIBIT 3B





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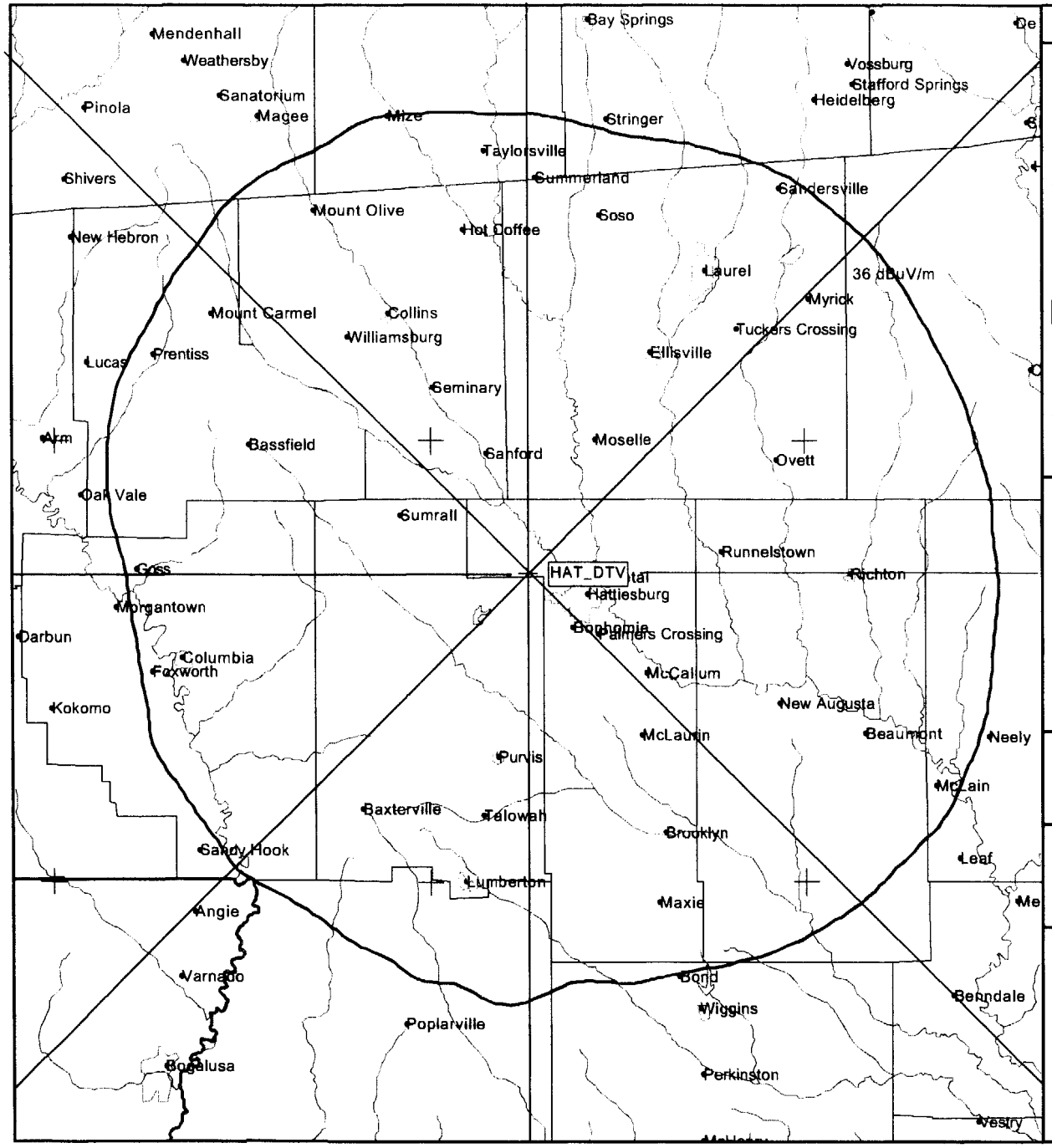
2K0418 EXHIBIT 4




SIGNAL™: HATTIESBURG.map

Prop. model: FCC-FCC
Time: 90.0% Loc.: 50.0%
Prediction Confidence Margin: 0.0dB
Climate: Continental Temperate
Groundcover: none
Atmospheric Abs.: none
K Factor: 1.333
RX Antenna - Type: OMNI
Height: 1.8 m AGL Gain: 0.00 dBd

Field strength at remote

■ = 36.0 dBuV/m

Min. receiver threshold level: -200.0 dBmW

| Site | Ant. Elev. AMSL (m) | ERPd (dBW) | Ant. Type /Orient. | Coordinates |
|---|---|---|---|---|
| HAT_DTV | 173.0 | 30.00 | Omni-H | N31°21'02.00 |
| group: 1 | 189.0000 MHz | | | W89°22'12.00 |

Notes

EFFECTIVE RADIATED POWER: 1KW
EFFECTIVE HEIGHT (AAT): 99M

DTV CHANNEL 9

USGS DLG OVERLAY

GREEN CONTOURS: CITY BOUNDARIES
BLUE CONTOURS: WATER

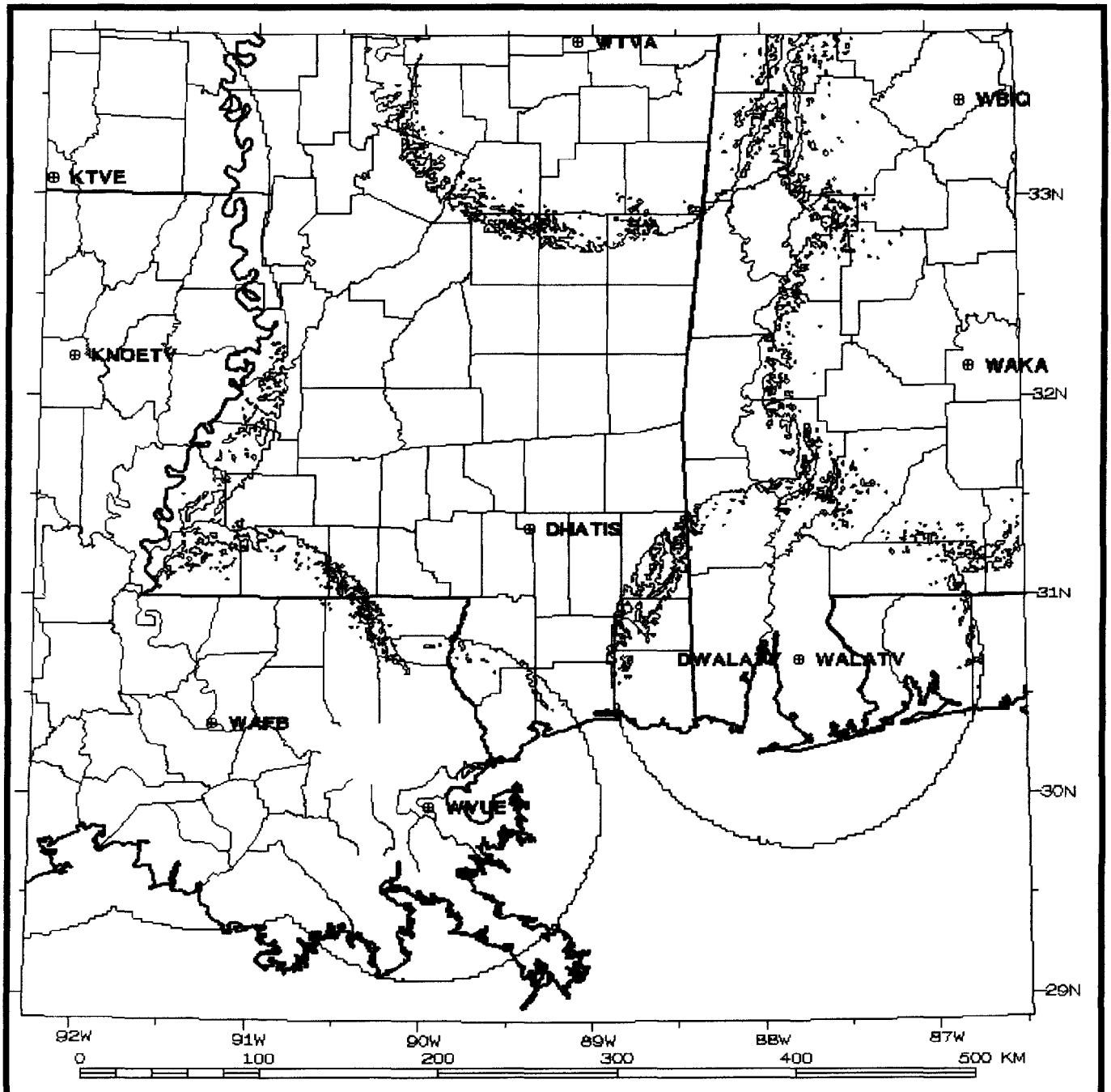
KILOMETERS

-5 0 20

# DTV COVERAGE CONTOUR

HATTIESBURG, MISSISSIPPI

EXHIBIT 5 2K0418




No Interference
Area: 184330. sq km
Population: 6200000.
Households: 1911000.

Interference
Area: 1500. sq km
Population: 13000.
Households: 3000.

Signal below minimum
Area: 120840. sq km
Population: 1635000.
Households: 494000.

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HATTIESBURG, MISSISSIPPI

2K0418 EXHIBIT 6A1

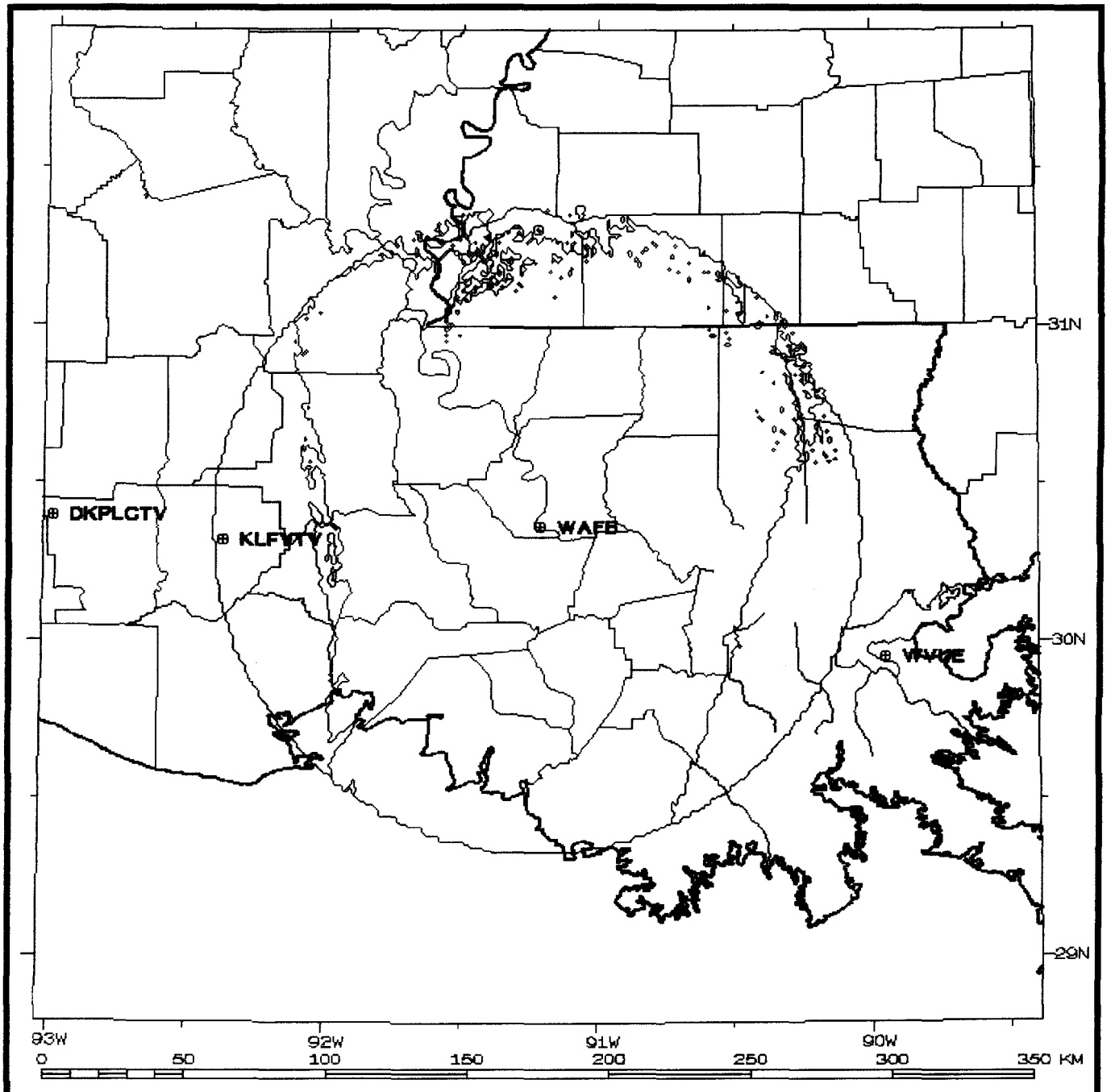
NTSC/DTV Interference study /taservice/restart/RS397Jul2999A.desc
Undesired Station Name: DHATIS Station Type: HDTV
City: HATTIESBUR State: MS Channel: 9
Desired Station 1 Name: WVUE Station Type: NTSC
City: NEW ORLEAN State: LA Channel: 8 km:164.8 mi:102.4 bear:199.8
Desired Station 3 Name: WALATV Station Type: NTSC
City: MOBILE State: AL Channel: 10 km:166.8 mi:103.7 bear:115.8
Desired Station 4 Name: WAFB Station Type: NTSC
City: BATON ROUG State: LA Channel: 9 km:207.1 mi:128.7 bear:238.6
Desired Station 5 Name: WAKA Station Type: NTSC
City: SELMA State: AL Channel: 8 km:260.4 mi:161.8 bear: 69.4
Desired Station 6 Name: KNOETV Station Type: NTSC
City: MONROE State: LA Channel: 8 km:271.8 mi:168.9 bear:290.9
Desired Station 7 Name: WTVA Station Type: NTSC
City: TUPELO State: MS Channel: 9 km:272.9 mi:169.6 bear: 5.5
Desired Station 8 Name: KLFYTV Station Type: NTSC
City: LAFAYETTE State: LA Channel: 10 km:309.0 mi:192.0 bear:249.1
Desired Station 9 Name: KTVE Station Type: NTSC
City: EL DORADO State: AR Channel: 10 km:330.3 mi:205.2 bear:306.3
Desired Station 10 Name: WBIQ Station Type: NTSC
City: BIRMINGHAM State: AL Channel: 10 km:338.5 mi:210.4 bear: 44.7
Desired Station 2 Name: DWALATV Station Type: HDTV
City: MOBILE State: AL Channel: 9 km:166.8 mi:103.7 bear:115.8
Desired Station 11 Name: DKPLCTV Station Type: HDTV
City: LAKE CHARL State: LA Channel: 8 km:362.4 mi:225.2 bear:253.9
Stations that are actually interfered with.

| Name | NTSC Int | HDTV Int | Population(1997) |
|---|---|---|---|
| WAFB | .00 sq km | 404.37 sq km | 5099. |
| DWALATV | .00 sq km | 1088.95 sq km | 7782. |

Signal below minimum
Area: 120840. sq km
Population: 1635000.
Households: 494000.

Interference
Area: 1500. sq km
Population: 13000.
Households: 3000.

No Interference
Area: 184330. sq km
Population: 6200000.
Households: 1911000.




No Interference
Area: 30870. sq km
Population: 1183000.
Households: 365000.

HDTV Interference
Area: 50. sq km
Population: 1000.
Households: 0.

NTSC Interference
Area: 8900. sq km
Population: 704000.
Households: 240000.

Signal below minimum
Area: 82960. sq km
Population: 1585000.
Households: 517000.

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2K0418 EXHIBIT 6B1

NTSC/DTV Interference study /taservice/restart/RS397Jul2999D.desc

Desired Station Name: WAFB Station Type: NTSC
City: BATON ROUG State: LA Channel: 9

Undesired Station 1 Name: KLFYTV Station Type: NTSC
City: LAFAYETTE State: LA Channel: 10 km:111.8 mi: 69.5 bear:267.8

Undesired Station 2 Name: WVUE Station Type: NTSC
City: NEW ORLEAN State: LA Channel: 8 km:129.8 mi: 80.6 bear:110.3

Undesired Station 4 Name: KNOETV Station Type: NTSC
City: MONROE State: LA Channel: 8 km:219.0 mi:136.1 bear:338.4

Undesired Station 5 Name: KTVE Station Type: NTSC
City: EL DORADO State: AR Channel: 10 km:316.3 mi:196.6 bear:342.6

Undesired Station 7 Name: WALATV Station Type: NTSC
City: MOBILE State: AL Channel: 10 km:328.9 mi:204.3 bear: 82.9

Undesired Station 8 Name: KTRE Station Type: NTSC
City: LUFKIN State: TX Channel: 9 km:361.6 mi:224.7 bear:289.8

Undesired Station 10 Name: KUHT Station Type: NTSC
City: HOUSTON State: TX Channel: 8 km:421.4 mi:261.8 bear:259.0

Undesired Station 3 Name: DKPLCTV Station Type: HDTV
City: LAKE CHARL State: LA Channel: 8 km:171.6 mi:106.6 bear:271.5

Undesired Station 6 Name: DWALATV Station Type: HDTV
City: MOBILE State: AL Channel: 9 km:328.9 mi:204.3 bear: 82.9

Undesired Station 9 Name: DKUHT Station Type: HDTV
City: HOUSTON State: TX Channel: 9 km:421.4 mi:261.8 bear:259.0

Stations that actually do contribute to interference.

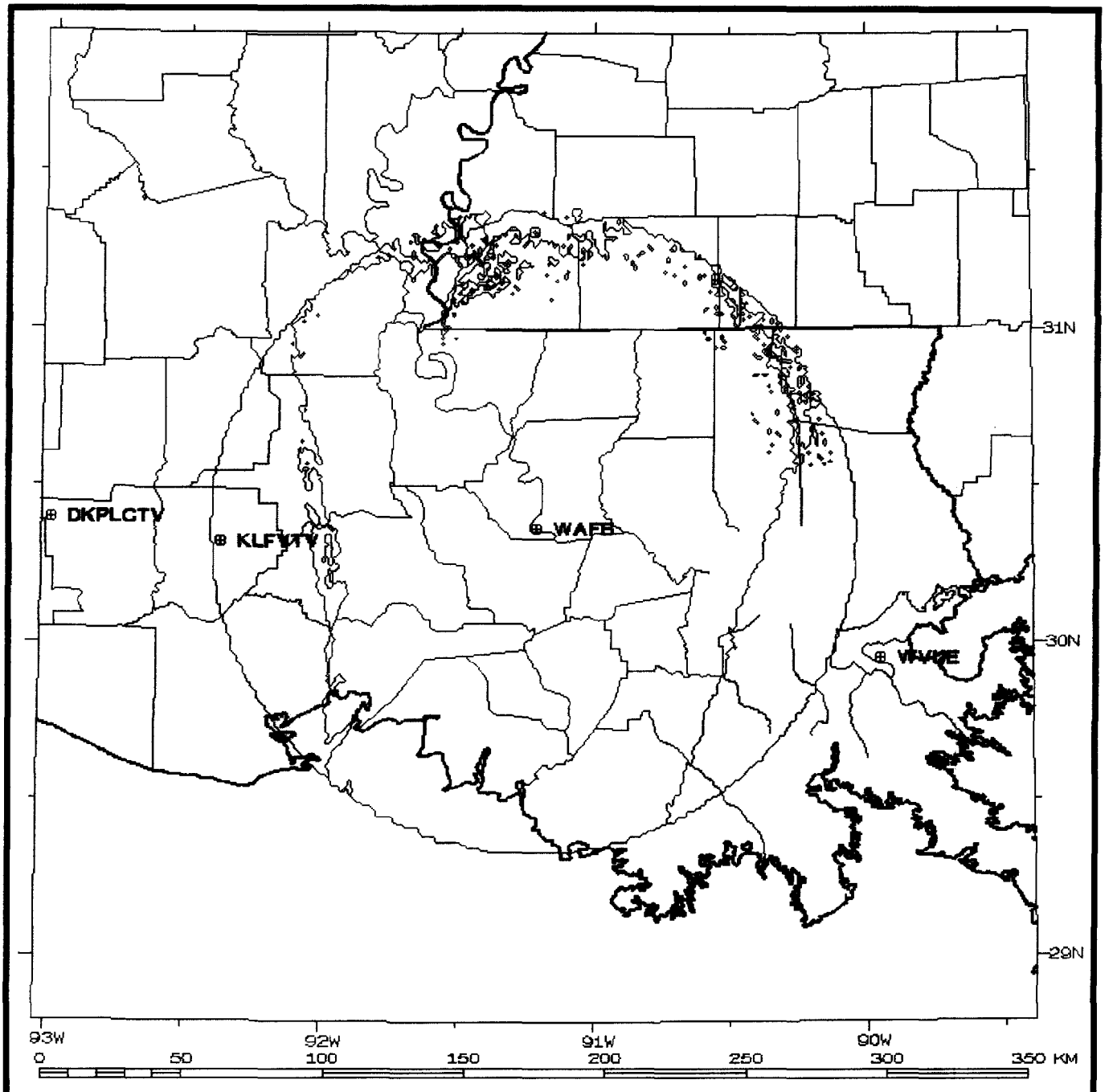
| Name | NTSC Int | Nonmasked HDTV Int | Population (1990) | Total Area of Int | Population |
|---|---|---|---|---|---|
| KLFYTV | 4388.13 sq km | .00 sq km | 263377. | 4388.13 sq km | 263377. |
| WVUE | 4006.71 sq km | .00 sq km | 444586. | 4006.71 sq km | 444586. |
| KNOETV | 490.56 sq km | .00 sq km | 1055. | 490.56 sq km | 1055. |
| DWALATV | .00 sq km | 43.70 sq km | 564. | 105.99 sq km | 1205. |

Signal below minimum
Area: 82960. sq km
Population: 1565000.
Households: 517000.

NTSC Interference
Area: 8900. sq km
Population: 704000.
Households: 240000.

HDTV Interference
Area: 50. sq km
Population: 1000.
Households: 0.

No Interference
Area: 30870. sq km
Population: 1183000.
Households: 365000.




No Interference
Area: 30630. sq km
Population: 1180000.
Households: 364000.

HDTV Interference
Area: 290. sq km
Population: 4000.
Households: 1000.

NTSC Interference
Area: 8900. sq km
Population: 704000.
Households: 240000.

Signal below minimum
Area: 82960. sq km
Population: 1565000.
Households: 517000.

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EXHIBIT 6B3

NTSC/DTV Interference study /taservice/restart/RS397Jul2999E.desc

Desired Station Name: WAFB Station Type: NTSC
City: BATON ROUG State: LA Channel: 9

Undesired Station 1 Name: KLFYTV Station Type: NTSC
City: LAFAYETTE State: LA Channel: 10 km:111.8 mi: 69.5 bear:267.8

Undesired Station 2 Name: WVUE Station Type: NTSC
City: NEW ORLEAN State: LA Channel: 8 km:129.8 mi: 80.6 bear:110.3

Undesired Station 5 Name: KNOETV Station Type: NTSC
City: MONROE State: LA Channel: 8 km:219.0 mi:136.1 bear:338.4

Undesired Station 6 Name: KTVE Station Type: NTSC
City: EL DORADO State: AR Channel: 10 km:316.3 mi:196.6 bear:342.6

Undesired Station 8 Name: WALATV Station Type: NTSC
City: MOBILE State: AL Channel: 10 km:328.9 mi:204.3 bear: 82.9

Undesired Station 9 Name: KTRE Station Type: NTSC
City: LUFKIN State: TX Channel: 9 km:361.6 mi:224.7 bear:289.8

Undesired Station 11 Name: KUHT Station Type: NTSC
City: HOUSTON State: TX Channel: 8 km:421.4 mi:261.8 bear:259.0

Undesired Station 3 Name: DKPLCTV Station Type: HDTV
City: LAKE CHARL State: LA Channel: 8 km:171.6 mi:106.6 bear:271.5

Undesired Station 4 Name: DHATIS Station Type: HDTV
City: HATTIESBUR State: MS Channel: 9 km:207.1 mi:128.7 bear: 57.6

Undesired Station 7 Name: DWALATV Station Type: HDTV
City: MOBILE State: AL Channel: 9 km:328.9 mi:204.3 bear: 82.9

Undesired Station 10 Name: DKUHT Station Type: HDTV
City: HOUSTON State: TX Channel: 9 km:421.4 mi:261.8 bear:259.0

Stations that actually do contribute to interference.

| Name | NTSC Int | Nonmasked HDTV Int | Population (1990) | Total Area of Int | Population |
|---|---|---|---|---|---|
| KLFYTV | 4388.13 sq km | .00 sq km | 263377. | 4388.13 sq km | 263377. |
| WVUE | 4006.71 sq km | .00 sq km | 444586. | 4006.71 sq km | 444586. |
| KNOETV | 490.56 sq km | .00 sq km | 1055. | 490.56 sq km | 1055. |
| DHATIS | .00 sq km | 289.20 sq km | 3371. | 373.86 sq km | 4179. |
| DWALATV | .00 sq km | 43.70 sq km | 564. | 105.99 sq km | 1205. |

Signal below minimum
Area: 82960. sq km
Population: 1565000.
Households: 517000.

NTSC Interference
Area: 8900. sq km
Population: 704000.
Households: 240000.

HDTV Interference
Area: 290. sq km
Population: 4000.
Households: 1000.

No Interference
Area: 30630. sq km
Population: 1180000.
Households: 364000

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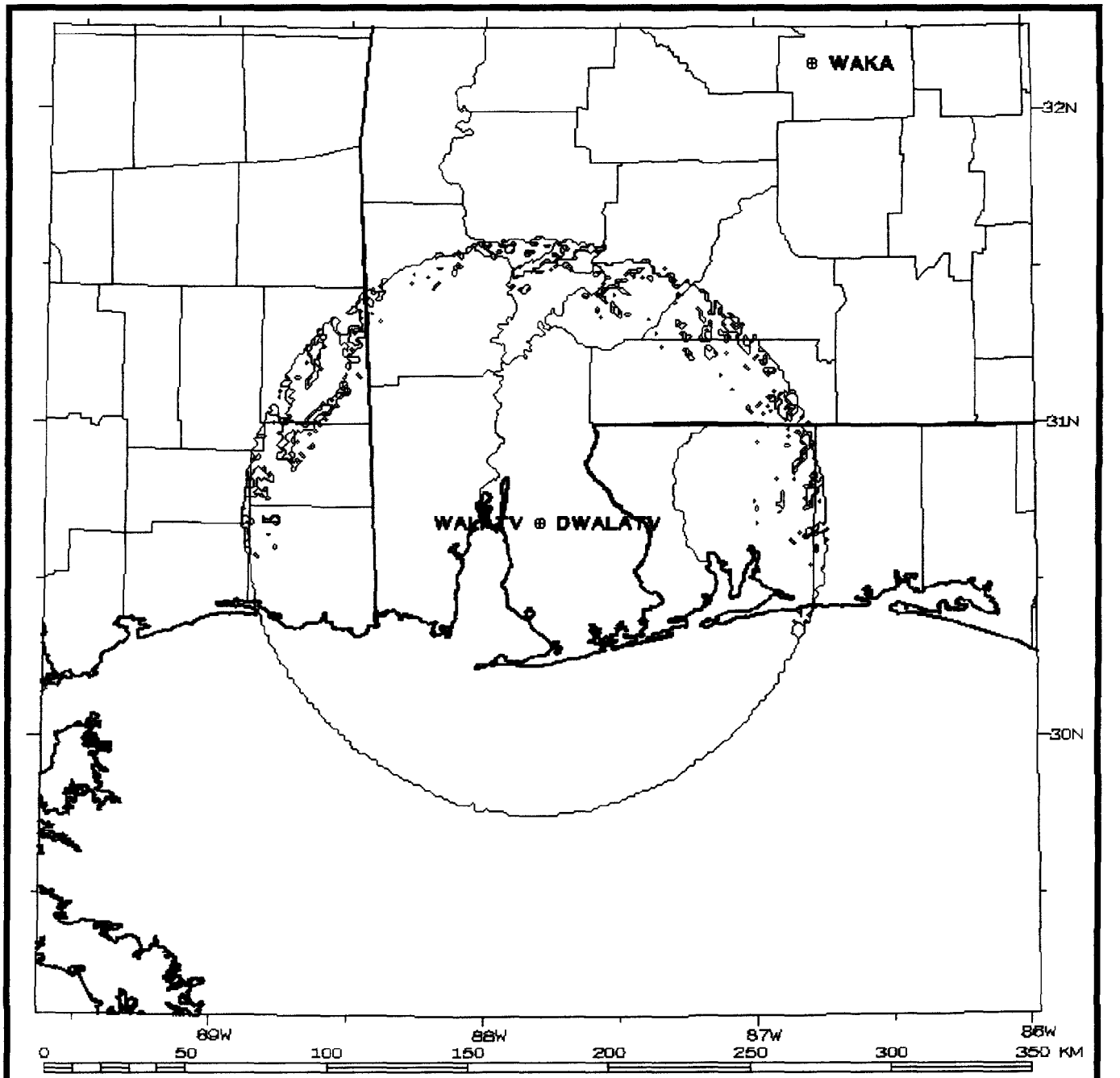
2K0418 EXHIBIT 6B4




No Interference
Area: 31350. sq km
Population: 1010000.
Households: 319000.

HDTV Interference
Area: 0. sq km
Population: 0.
Households: 0.

NTSC Interference
Area: 750. sq km
Population: 5000.
Households: 1000.

Signal below minimum
Area: 90980. sq km
Population: 879000.
Households: 277000.

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2K0418 EXHIBIT 6C1

NTSC/DTV Interference study /taservice/restart/RS397Jul2999F.desc
Desired Station Name: DWALATV Station Type: HDTV
City: MOBILE State: AL Channel: 9
Undesired Station 1 Name: WALATV Station Type: NTSC
City: MOBILE State: AL Channel: 10 km: .0 mi: .0 bear: .0
Undesired Station 2 Name: WAKA Station Type: NTSC
City: SELMA State: AL Channel: 8 km:189.0 mi:117.4 bear: 30.5
Undesired Station 3 Name: WVUE Station Type: NTSC
City: NEW ORLEAN State: LA Channel: 8 km:221.9 mi:137.9 bear:249.0
Undesired Station 4 Name: WBIQ Station Type: NTSC
City: BIRMINGHAM State: AL Channel: 10 km:325.1 mi:202.0 bear: 16.5
Undesired Station 5 Name: WAFB Station Type: NTSC
City: BATON ROUG State: LA Channel: 9 km:328.9 mi:204.3 bear:264.6
Undesired Station 6 Name: WTVM Station Type: NTSC
City: COLUMBUS State: GA Channel: 9 km:338.9 mi:210.6 bear: 56.8
Undesired Station 7 Name: WTVA Station Type: NTSC
City: TUPELO State: MS Channel: 9 km:365.9 mi:227.4 bear:341.0
Undesired Station 8 Name: WALBTV Station Type: NTSC
City: ALBANY State: GA Channel: 10 km:381.7 mi:237.2 bear: 78.2
Stations that actually do contribute to interference.

| Name | NTSC Int | Nonmasked HDTV Int | Population (1990) | Total Area of Int Population |
|---|---|---|---|---|
| WAFB | 341.55 sq km | .00 sq km | 1845. | 341.55 sq km 1845. |
| WTVM | 327.56 sq km | .00 sq km | 2015. | 327.56 sq km 2015. |
| WTVA | 189.93 sq km | .00 sq km | 1818. | 189.93 sq km 1818. |

Signal below minimum
Area: 90980. sq km
Population: 879000.
Households: 277000.

NTSC Interference
Area: 750. sq km
Population: 5000.
Households: 1000.

HDTV Interference
Area: 0. sq km
Population: 0.
Households: 0.

No Interference
Area: 31350. sq km
Population: 1010000.
Households: 319000.

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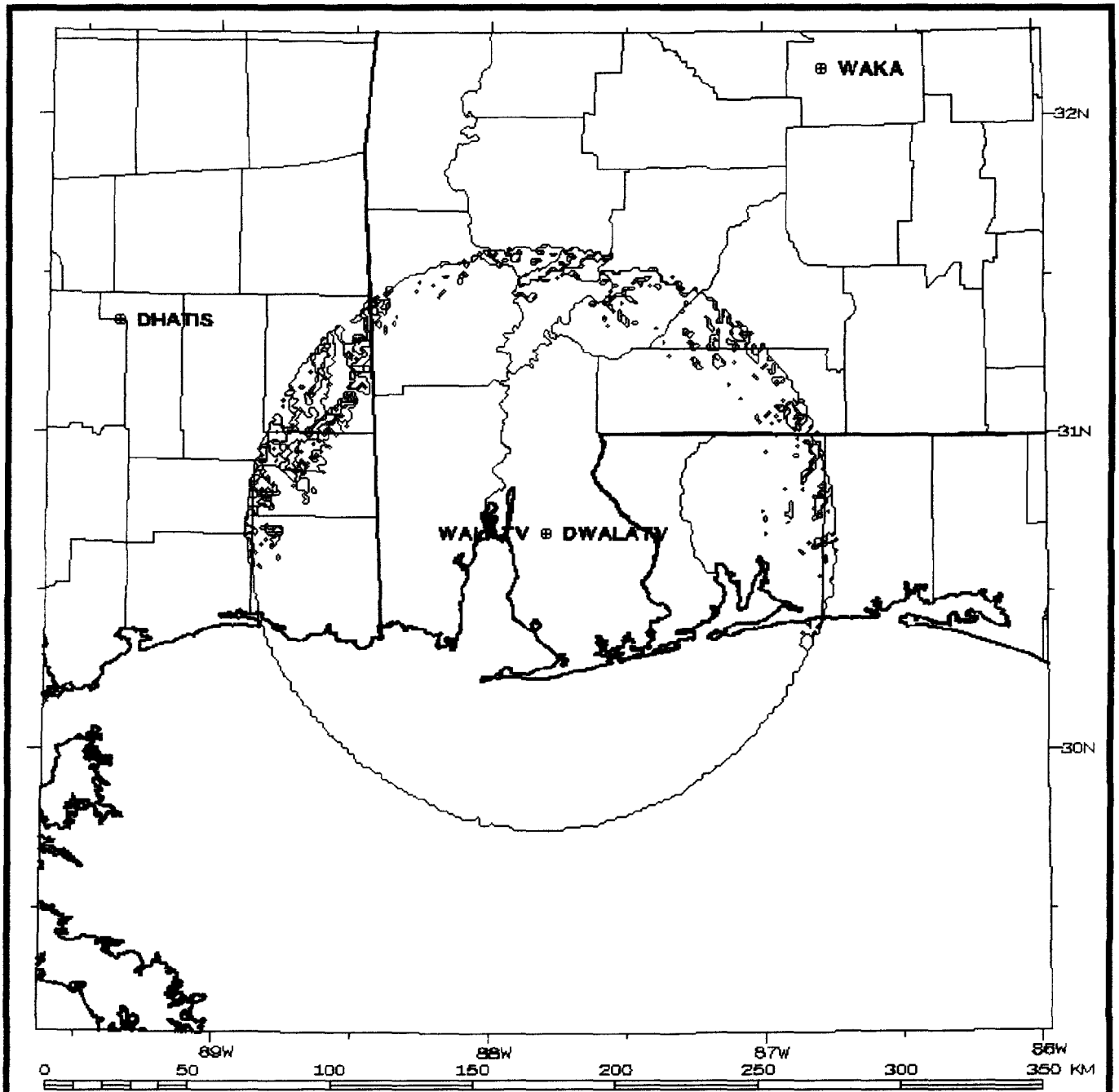
2K0418 EXHIBIT 6C2




No Interference
Area: 30730. sq km
Population: 1006000.
Households: 317000.

HDTV Interference
Area: 810. sq km
Population: 4000.
Households: 1000.

NTSC Interference
Area: 750. sq km
Population: 5000.
Households: 1000.

Signal below minimum
Area: 90980. sq km
Population: 879000.
Households: 277000.

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2K0418 EXHIBIT 6C3

NTSC/DTV Interference study /taservice/restart/RS397Jul2999G.desc

Desired Station Name: DWALATV Station Type: HDTV
City: MOBILE State: AL Channel: 9

Undesired Station 1 Name: WALATV Station Type: NTSC
City: MOBILE State: AL Channel: 10 km: .0 mi: .0 bear: .0

Undesired Station 3 Name: WAKA Station Type: NTSC
City: SELMA State: AL Channel: 8 km:189.0 mi:117.4 bear: 30.5

Undesired Station 4 Name: WVUE Station Type: NTSC
City: NEW ORLEAN State: LA Channel: 8 km:221.9 mi:137.9 bear:249.0

Undesired Station 5 Name: WBIQ Station Type: NTSC
City: BIRMINGHAM State: AL Channel: 10 km:325.1 mi:202.0 bear: 16.5

Undesired Station 6 Name: WAFB Station Type: NTSC
City: BATON ROUG State: LA Channel: 9 km:328.9 mi:204.3 bear:264.6

Undesired Station 7 Name: WTVM Station Type: NTSC
City: COLUMBUS State: GA Channel: 9 km:338.9 mi:210.6 bear: 56.8

Undesired Station 8 Name: WTVA Station Type: NTSC
City: TUPELO State: MS Channel: 9 km:365.9 mi:227.4 bear:341.0

Undesired Station 9 Name: WALBTV Station Type: NTSC
City: ALBANY State: GA Channel: 10 km:381.7 mi:237.2 bear: 78.2

Undesired Station 2 Name: DHATIS Station Type: HDTV
City: HATTIESBUR State: MS Channel: 9 km:166.8 mi:103.7 bear:296.6

Stations that actually do contribute to interference.

| Name | NTSC Int | Nonmasked HDTV Int | Population (1990) | Total Area of Int | Population |
|---|---|---|---|---|---|
| WAFB | 341.55 sq km | .00 sq km | 1845. | 341.55 sq km | 1845. |
| WTVM | 327.56 sq km | .00 sq km | 2015. | 327.56 sq km | 2015. |
| WTVA | 189.93 sq km | .00 sq km | 1818. | 189.93 sq km | 1818. |
| DHATIS | .00 sq km | 616.45 sq km | 4188. | 990.12 sq km | 6290. |

Signal below minimum
Area: 90980. sq km
Population: 879000.
Households: 277000.

NTSC Interference
Area: 750. sq km
Population: 5000.
Households: 1000.

HDTV Interference
Area: 610. sq km
Population: 4000.
Households: 1000.

No Interference
Area: 30730. sq km
Population: 1006000.
Households: 317000.

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